CLAIM SET AS AMENDED

1. (Currently Amended) A tire air pressure detecting device for monitoring a tire air pressure by transmitting a signal representing the tire air pressure detected at a wheel to a vehicle body and receiving the signal representing the tire air pressure at the vehicle body comprising:

tire air pressure detecting means on the wheel for detecting the tire air pressure~~, the tire air pressure detecting means including vehicle speed detecting means for setting a frequency reading the tire air pressure based on a vehicle speed~~;

main transmitting means on the wheel for transmitting an air pressure signal representing the tire air pressure detected by said tire air pressure detecting means to the vehicle body;

main receiving means on the vehicle body for receiving the air pressure signal transmitted from said main transmitting means;

main switch turn-on detecting means on the vehicle body for generating a main switch ON signal when the turn-on of a main switch is detected;

vehicle body side control means on the vehicle body for receiving the air pressure signal received by said main receiving means and the main switch ON signal generated by said main switch turn-on detecting means;

auxiliary transmitting means on the vehicle body for transmitting a transmission instruction signal to the wheel to transmit a new air pressure signal from said main

transmitting means to said main receiving means based on a vehicle body side control signal from said vehicle body side control means when said vehicle body side control means receives the main switch ON signal;

auxiliary receiving means on the wheel for receiving the transmission instruction signal transmitted from said auxiliary transmitting means;

wheel side control means on the wheel for generating a wheel side control signal to read a new air pressure signal from said tire air pressure detecting means and transmit the air pressure signal to said main transmitting means based on the transmission instruction signal received by said auxiliary receiving means,

and in addition to transmitting the transmission instruction signal received by said auxiliary receiving means, the main transmitting means also transmitting the air pressure signal repetitively at a predetermined constant frequency, the predetermined constant frequency of transmitting the air pressure signal varying depending on a vehicle speed.

2. (Canceled)

3. (Currently Amended) The tire air pressure detecting device for monitoring a tire air pressure according to claim 13, and further including a seal member disposed between the detector body and the wheel for preventing air from leaking out of an air chamber in the tire.

4. (Currently Amended) The tire air pressure detecting device for monitoring a tire air pressure according to claim 13, and further including a nut threaded on said tire valve for securing said detector body to the wheel.

5. (Original) The tire air pressure detecting device for monitoring a tire air pressure according to claim 1, and further including a warning unit for providing a warning if the tire air pressure is not within predetermined guidelines.

6. (Original) The tire air pressure detecting device for monitoring a tire air pressure according to claim 5, and further including storage means for storing a range of tire air pressures and a range of vehicle speeds for providing said predetermined guidelines to said warning unit.

7. (Currently Amended) A tire air pressure detecting device for monitoring a tire air pressure by transmitting a signal representing the tire air pressure detected at a wheel to a vehicle body and receiving the signal representing the tire air pressure at the vehicle body by comprising:

tire air pressure detecting means on the wheel for detecting the tire air pressure, the tire air pressure detecting means;

transmitting means on the wheel for transmitting an air pressure signal representing the tire air pressure detected by said tire air pressure detecting means to the vehicle body;

receiving means on the vehicle body for receiving the air pressure signal transmitted from said transmitting means;

main switch turn-off detecting means for generating a main switch OFF signal when the turn-off of a main switch is detected;

vehicle body side control means on the vehicle body for receiving the main switch OFF signal generated by said main switch turn-off detecting means and the air pressure signal received by said receiving means, and storing the air pressure signal; and

a vehicle body side timer on the vehicle body for operating said receiving means for a constant period of time at each of predetermined time intervals when said vehicle body side control means receives the main switch OFF signal,

wherein a receiving time interval (Tr) is an interval between successive instances during which said receiving means receives the air pressure signal from said transmitting means, a receiving time (Hr) is ~~an interval~~ a time during which said receiving means receives the air pressure signal from said transmitting means, and a transmitting time interval (Tt) is an interval during which said transmitting means transmits the air pressure signal to the vehicle body,

the receiving time interval (Tr), the receiving time ~~interval~~ (Hr), and the transmitting time interval (Tt) being related to each other by ~~the~~ a formula Tr > Hr > Tt.

8. (Canceled)

9. (Currently Amended) The tire air pressure detecting device for monitoring a tire air pressure according to claim 18, and further including a seal member disposed between the detector body and the wheel for preventing air from leaking out of an air chamber in the tire.

10. (Currently Amended) The tire air pressure detecting device for monitoring a tire air pressure according to claim 18, and further including a nut threaded on said tire valve for securing said detector body to the wheel.

11. (Original) The tire air pressure detecting device for monitoring a tire air pressure according to claim 7, and further including a warning unit for providing a warning if the tire air pressure is not within predetermined guidelines.

12. (Original) The tire air pressure detecting device for monitoring a tire air pressure according to claim 11, and further including storage means for storing a range of tire air pressures and a range of vehicle speeds for providing said predetermined guidelines to said warning unit.

13. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 1, wherein the air pressure detecting means includes a detector body and a tire valve mounted on the detector body.

14. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 13, wherein the detector body is formed with a communication hole, the detector body being disposed in a recess in the wheel.

15. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 13, and further including a nut threaded on said tire valve for securing said detector body to a recess of the wheel.

16. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 13, and further including a nut threaded on said tire valve for securing said detector body to the wheel, the nut being a single nut for securing both of said detector body and said tire valve to the wheel.

17. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 16, wherein the nut threaded on said tire valve presses against a surface area of the wheel which is opposite to a surface of the wheel where said detector body is secured to the wheel.

18. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 7, wherein the air pressure detecting means includes a detector body and a tire valve mounted on the detector body.

19. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 18, wherein the detector body is formed with a communication hole and is disposed in a recess in the wheel.

20. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 18, and further including a nut threaded on said tire valve for securing said detector body to a recess of the wheel.

21. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 18, and further including a nut threaded on said tire valve for securing said detector body to the wheel, the nut being a single nut for securing both of said detector body and said tire valve to the wheel.

22. (Previously Presented) The tire air pressure detecting device for monitoring a tire air pressure according to claim 21, wherein the nut threaded on said tire valve presses against a surface area of the wheel which is opposite to a surface of the wheel where said detector body is secured to the wheel.

23. (New) The tire air pressure detecting device for monitoring a tire air pressure according to claim 1, wherein the predetermined constant frequency of transmitting the air pressure varies on a stepwise basis depending on a vehicle speed.